APPENDIX D
SI NARRATIVE REPORT (EXAMPLE)

This appendix provides an example of a narrative report for a Sl at a fictitious site, following the form and content discussed in Chapter 6. Note that this guidance example does not include reproductions of reference material, full-size USGS topographic quadrangle maps, site photographs and accompanying photodocumentation log, or other applicable attachments.

SITE INSPECTION NARRATIVE REPORT
PALMETTO LANDFILL
PALMETTO COUNTY, SOUTH CAROLINA
TDD NO. Y9-87912-43

JANUARY 29,1992

XYZ Corporation

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CONTENTS

Date: January 29, 1992

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Site: Palmetto Landfill, 6250 Palmetto Drive
Palmetto County, South Carolina

EPA ID No.: SCD123456789

TDD No.: Y9-8765-43

1. INTRODUCTION

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the U.S. Environmental Protection Agency (EPA), Waste Management Division, Region 4 conducted a site inspection (SI) at the Palmetto Landfill Site near Angleton in Palmetto County, South Carolina. The purpose of this investigation was to collect information concerning conditions at the Palmetto Landfill sufficient to assess the threat posed to human health and the environment and to determine the need for additional investigation under CERCLA or other authority, and, if appropriate, support site evaluation using the Hazard Ranking System (HRS) for proposal to the National Priorities List (NPL). The investigation included reviewing previous information, sampling waste and environmental media to test preliminary assessment (PA) hypotheses and to evaluate and document HRS factors, collecting additional non-sampling information, and interviewing nearby residents.

2. SITE DESCRIPTION

2.1 Location

Palmetto Landfill is located at 6250 Palmetto Drive in a rural area of Palmetto County, South Carolina, approximately 1.5 miles east of the town of Angleton (Figure 1). The geographic coordinates are 18 E28'43"N latitude and 66 E07'33"W longitude (Reference 1).

Palmetto County is characterized by a mild, temperate climate. Summers are warm and humid with daily temperatures reaching 90 E F or higher. Daily high temperatures during winter are 55 E to 60E F. Net annual precipitation for the area is 10.87 inches (Reference 2, pp. 7, 10).

2.2 Site Description

The site property covers approximately 10 acres, approximately 6 acres of which were used for landfilling of wastes (Reference 3). The landfill is located on relatively flat terrain that slopes gently toward the northeast boundary (Reference 4) and Wildlife Creek, a small, slowly flowing stream (Reference 5, p. 124). The landfill is rectangular in shape and bordered on three sides by a drainage ditch approximately 8 to 10 feet deep and on the fourth side by Wildlife Creek (Reference 3) (Figure 2).

The original purpose of the ditch was to intercept ground water upgradient of the site and direct it around the buried waste (Reference 3). However, because the ditch is less than 10 feet deep and the surficial. aquifer is approximately 25 feet deep, the ditch does not completely transect the aquifer. Also, because the ditch

FIGURE 1: SITE LOCATION MAP
PALMETTO LANDFILL

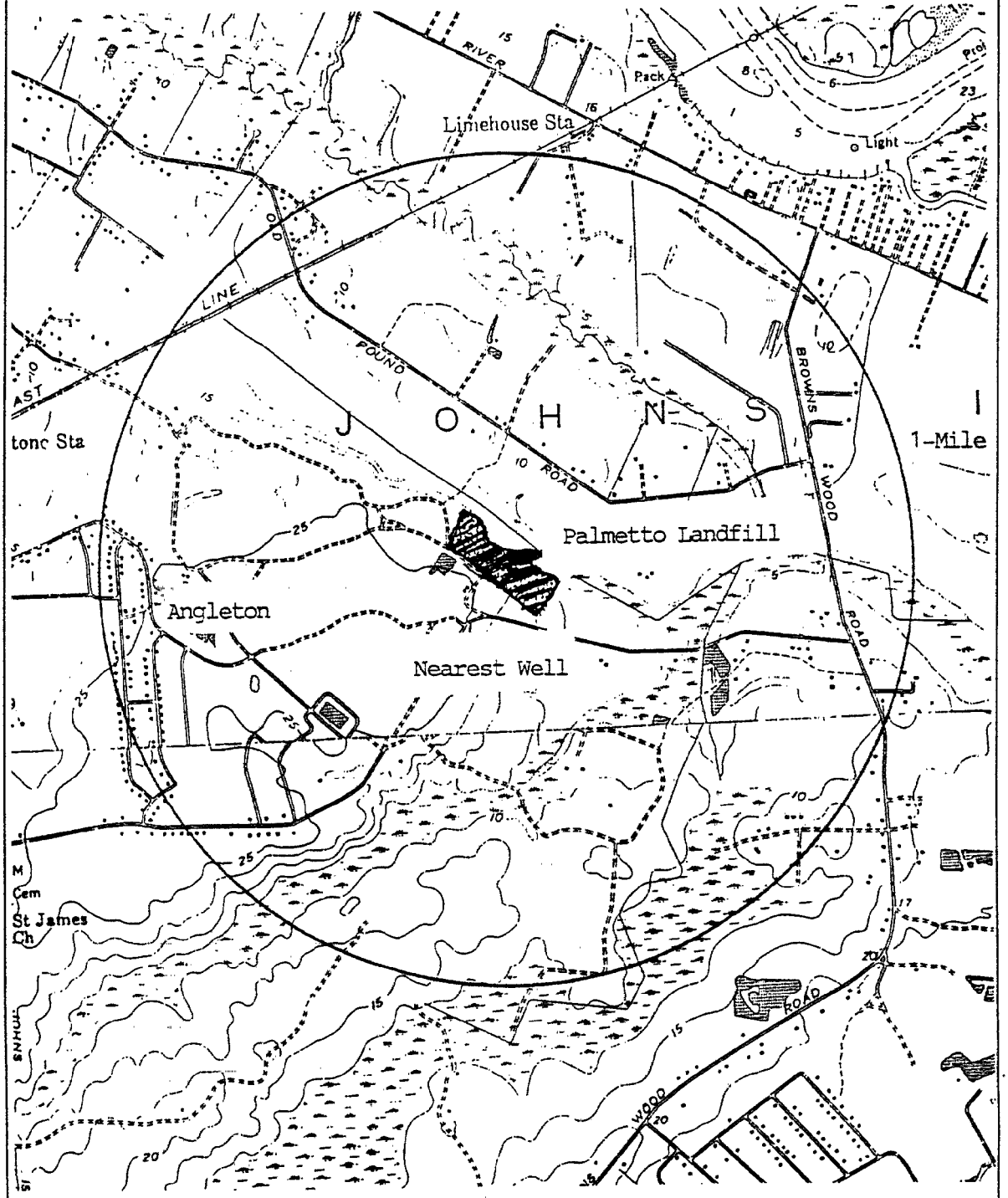
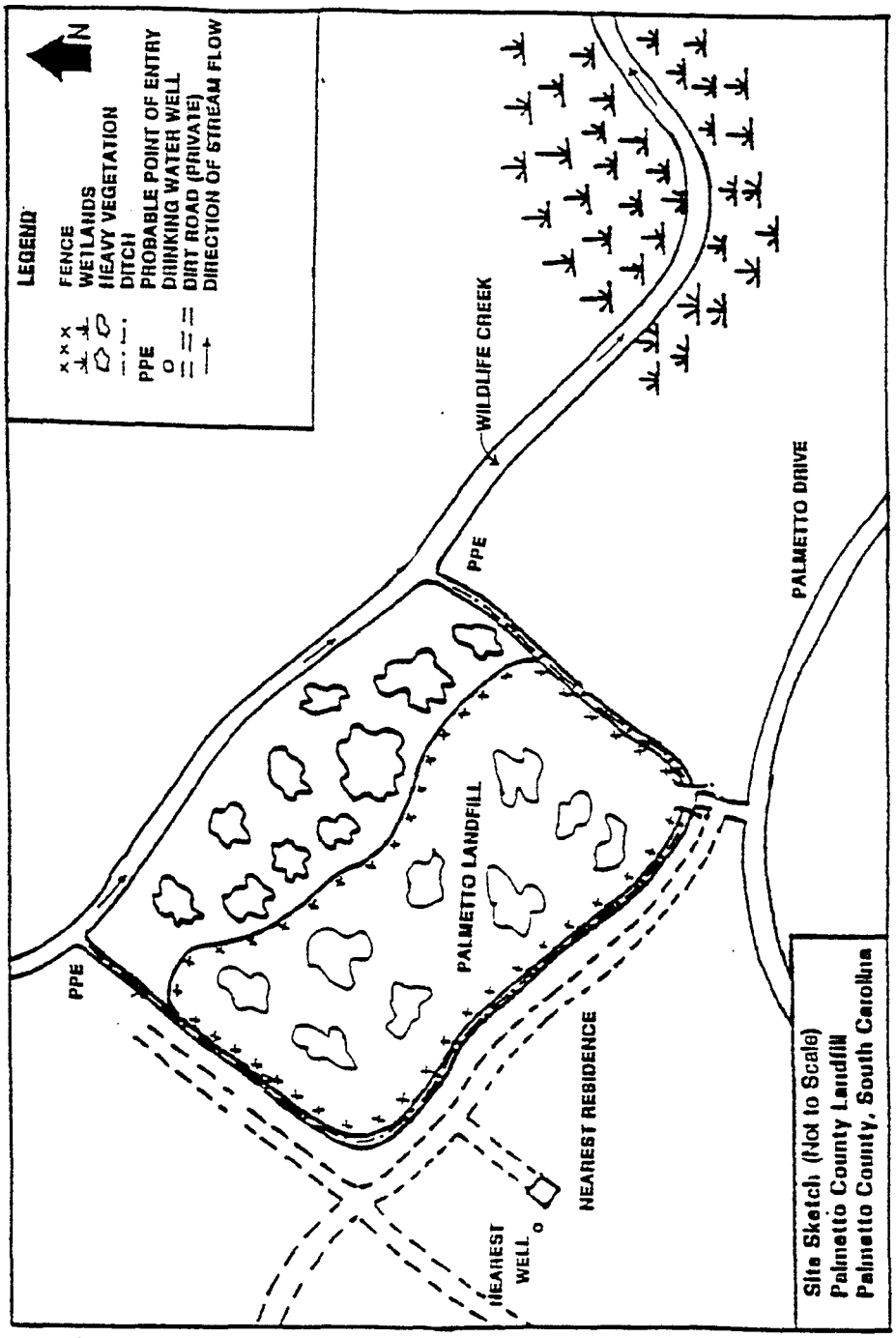


FIGURE 2: SITE LAYOUT
PALMETTO LANDFILL



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intersects the top of the local water table, it perennially flows. The ditch creates a barrier to runoff from areas upgradient of the site. Along the banks of the ditch there is evidence of stressed vegetation. Water in the eastern segment of the ditch where leachate is draining from the landfill is an orange-brown color and oily in appearance (Reference 4).

No buildings or other structures are on the property. The perimeter of the facility is fenced, the fencing appears to be in good condition, and there is a locked entrance gate across the access road to the site (Reference 4; Reference 7, p. 3). The drainage ditch is located outside of the fenced facility.

2.3 Operational History and Waste Characteristics

Smith and Moore Disposal Services, 1111 Main Street, Angleton, South Carolina, owns the ten-acre property. Landfill operations began in April 1970 for disposal of municipal garbage and household debris. Beginning in October 1978, the landfill accepted industrial waste on a limited basis. Smith and Moore kept no formal records of the amounts and types of wastes received. However, there is evidence indicating that the landfill received a one-time shipment of approximately 500 gallons of trichloroethylene (TCE) waste (Reference 3). The common practice of disposal at Palmetto Landfill was to excavate trenches 7 to 10 feet deep, fill the trenches with waste material, and emplace a daily cover of soil. Landfilling operations were discontinued in July 1980 when the landfill reached capacity. Upon closure, a 2-foot soil cover was placed over the entire landfill and seeded (Reference 3).

The soil cap is in relatively good condition except in two places where it appears to have been breached and a small depression is filled with a black sludge-like material (Reference 6). Approximately 200 feet northwest of this depression is an area where vegetation is brown and dying (Reference 6).

Palmetto Landfill operated under permit Number 999-999 issued by the South Carolina Department of Health and Environmental Concerns (SCDHEC). SCDHEC inspected the landfill when it closed and have inspected it several times at irregular intervals. No previous sampling or remedial action is known to have taken place at Palmetto Landfill (Reference 7).

3. WASTE/SOURCE SAMPLING

3.1 Sample Locations

Table 1 presents sample numbers, locations, and objectives for all samples collected during the SI. Four waste/source samples were collected (Figure 3):

- Two from the landfill surface, one in the small, wet depression and the other 200 feet northwest of the depression in an area of stressed vegetation.

- Two from the drainage ditch where leachate appeared to be leaking out of the site and entering surface water.

3.2 Analytical Results

Sample PL-WS-1, collected from the black sludge material, exhibited estimated concentrations of TCE and chlorobenzene. Aldrin, a chlorinated pesticide, also was identified in sample PL-WS-1 at 560 ppb and in sample PL-WS-2 at 75 ppb. Background soil sample PL-SS-2 contained none of these substances. Samples PL-WS-3 and PL-WS-4D exhibited the greatest number of contaminants found at the site. Benzene,

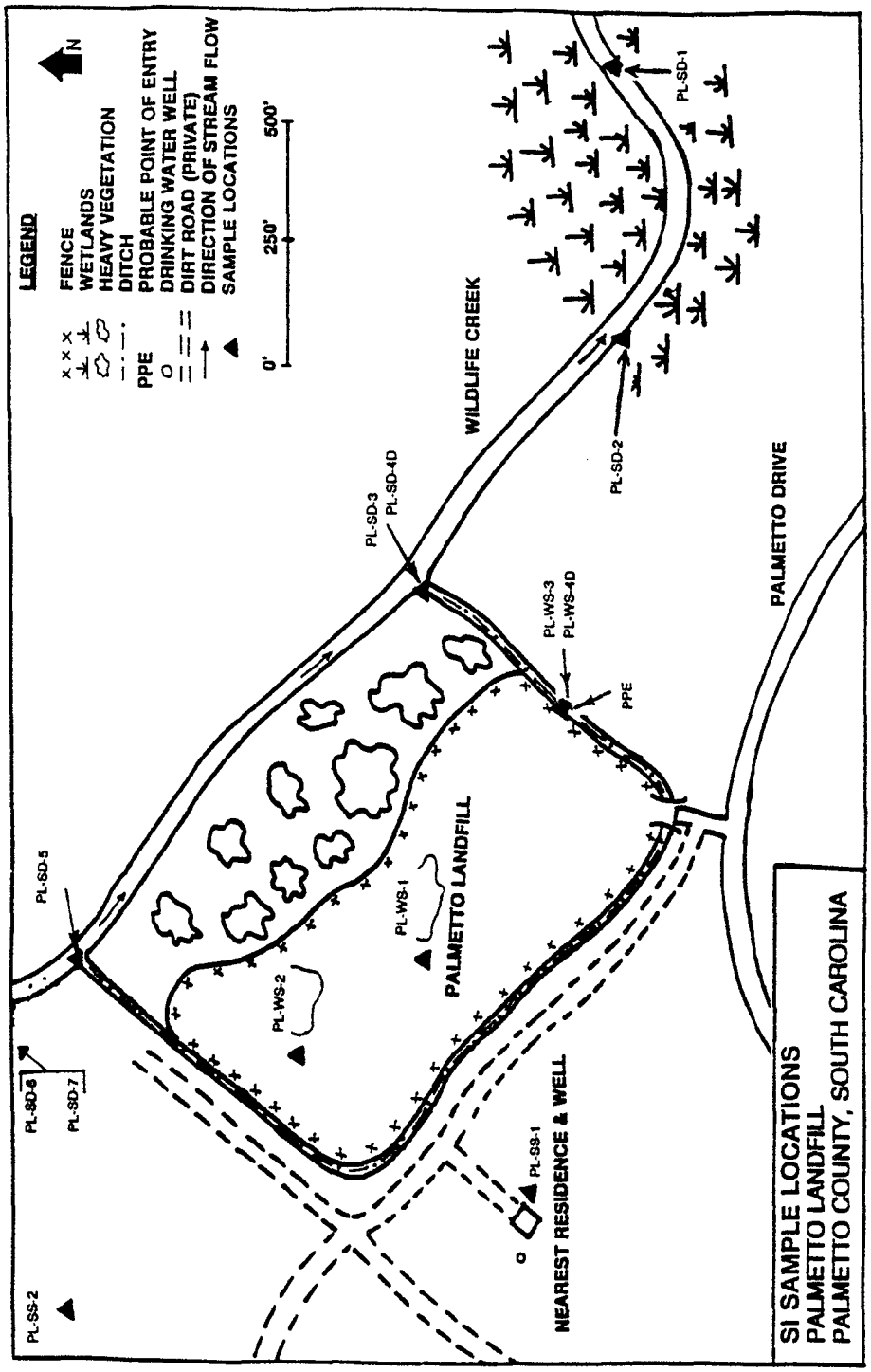
TABLE 1: SAMPLE COLLECTION

Sample Number	Sample Type	Location	Date	Time
PL-WS-1	Waste material	Waste sample collected at depth of 0.5' from landfill depression to determine types and concentrations of hazardous substances onsite.	9/4/91	1400
PL-WS-2	Surfacial soil	Soil sample collected at depth of 0.5' from area of stressed vegetation to determine types and concentrations of hazardous substances onsite.	9/4/91	1445
PL-WS-3	Aqueous waste	Leachate sample collected from east side of perimeter ditch to determine types and concentrations of hazardous substances onsite and to investigate release to surface water.	9/4/91	1500
PL-WS-4D	Aqueous waste	Duplicate of PL-WS-3.	9/4/91	1530
PL-GW-1	Aqueous	Sample collected from private well approx. 300' south of landfill to investigate release and target contamination.	9/4/91	1600
PL-GW-2D	Aqueous	Duplicate of PL-GW-1.	9/4/91	1630
PL-GW-3	Aqueous	Sample collected from private well approx. 1000' southeast of landfill to investigate release and target contamination.	9/4/91	1430
PL-GW-4	Aqueous	Sample collected from private well 1,000' east of landfill to investigate contamination.	9/4/91	1300
PL-GW-5	Aqueous	Sample collected from private well 1,000' north of landfill to investigate contamination.	9/4/91	1130
PL-GW-6	Aqueous	Sample collected from private well 1,200' north of landfill to investigate contamination.	9/4/91	1000
PL-GW-7	Aqueous	Sample collected from private well 1,200' north of landfill to investigate contamination.	9/4/91	0830
PL-GW-8	Aqueous	Field blank	9/4/91	0730

TABLE 1: SAMPLE COLLECTION

Sample Number	Sample Type	Location	Date	Time
PL-SD-1	Sediment	Sample collected approx. 1,100' downstream of Wildlife Creek in wetland.	9/4/91	0830
PL-SD-2	Sediment	Sample collected approx. 600' downstream of Wildlife Creek in wetland.	9/4/91	0900
PL-SD-3	Sediment	Sample collected at southern intersection of perimeter ditch with Wildlife Creek in fishery.	9/4/91	1000
PL-SD-4	Sediment	Duplicate of PL-SD-3.	9/4/91	1030
PL-SD-5	Sediment	Sample collected at northwest intersection of perimeter ditch with Wildlife Creek in fishery.	9/4/91	1130
PL-SD-6	Sediment	Sample collected approx. 100' upstream from northwest intersection of perimeter ditch and Wildlife Creek.	9/4/91	1200
PL-SD-7	Sediment	Sample collected approx. 200' upstream from northwest intersection of perimeter ditch and Wildlife Creek.	9/4/91	1230
PL-SS-1	Surficial soil	Sample collected at a depth of 1.5' approx. 300' southwest of landfill from property of nearest residence; investigate presence of hazardous substances in residential property.	9/4/91	1400
PL-SS-2	Surficial soil	Sample from offsite location in native soil.	9/4/91	1500

FIGURE 3: SI SAMPLE LOCATIONS
PALMETTO LANDFILL



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chloroethane, 1,1-dichloroethane, ethylbenzene, and aldrin were found in elevated levels in leachate samples. TCE was detected in leachate samples (PL-WS-3 and PL-WS-4D) at concentrations greater than three times the detection limit. Several metals were detected at elevated levels, most notably arsenic, lead, chromium, and mercury. Toluene and bis(2-ethylhexyl)phthalate, detected in all of the waste source samples, are common laboratory contaminants.

3.3 Conclusions

While the landfill was permitted to accept municipal waste, it also accepted industrial wastes on a limited basis beginning in 1978. There are also allegations of a one-time shipment of TCE waste material being deposited at the Palmetto site. Wastes were deposited by a trench method. There are no records of a liner or leachate collection system. While the cap appears to be in good condition, two areas exist where the integrity of the cap appears compromised. Elevated levels of organic and inorganic compounds were detected in samples obtained from breaches in the soil cap and from leachate discharging directly to the drainage ditch.

4. GROUND WATER PATHWAY

4.1 Hydrogeology

Palmetto County is in the Lower Coastal Plain Physiographic Province. Geologically, this area is characterized by a wedge of overlapping strata that increase in thickness towards the coast. Pleistocene terrace deposits underlie the Palmetto County area. These deposits include the following formations (from youngest to oldest): Jacksonville, Charlestown, Peerless, and Jacob. These formations were deposited from the transgressive/regressive sequences of a glacially controlled Pleistocene sea (Reference 8, p. 12). According to local well logs, the Jacksonville, Charlestown and Peerless formations are the only Pleistocene strata underlying the vicinity of Palmetto Landfill (Reference 9; Reference 10).

The Jacksonville Formation (5 to 25 feet thick) is composed of fine-grained sand and shell with interfingering layers of silt and clay. This formation is the only water supply aquifer for rural residents not served by a municipal system. The water is produced under water table conditions at a rate of 25 to 100 gallons per minute (Reference 8, p. 14).

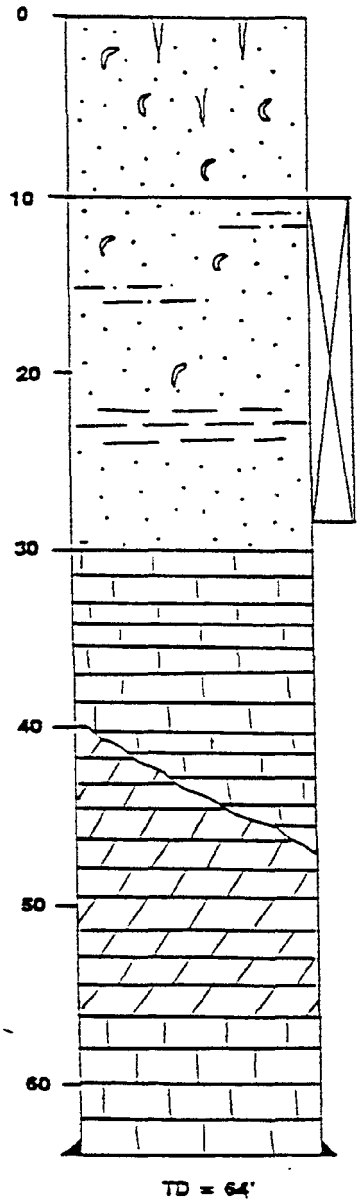
The Charlestown Formation consists of a sandy phosphatic limestone that has altered to a clayey, fine-grained dolomite at depth. The formation is considered to be a confining unit and is 25 to 45 feet thick in the southern Palmetto County area (Reference 8, p. 16).

The Peerless Formation is a porous, dark gray, fine-grained, fossiliferous limestone. This unit, approximately 45 to 60 feet thick, is under artesian conditions and produces brackish water.

Beneath the limestone is the Jacob Formation (60 to 105 feet thick) consisting of sand, silt, and clay. The Jacob Formation also produces brackish water (Reference 8, pp. 17-19).

Precipitation is the primary type of recharge to the Jacksonville Formation. Discharge is by wells, natural seepage, and evapotranspiration. Water flow in this aquifer varies from area to area as water moves by gravity from high to low elevations. Depth to ground water varies from 3 to 15 feet below land surface in Palmetto County (Reference 8, p. 15). At Palmetto Landfill, the depth to ground water is approximately 10 feet, as determined from a well log of a nearby drinking water well (Figure 4) (Reference 9; Reference 10).

FIGURE 4: WELL LOG FROM 19 PALMETTO LANE



Surface Soil

Weathered, red, sandy, roots, shells

Jacksonville Formation (top of water table)

Fine grained, well sorted, unconsolidated sand, scattered shells, thin layers of silt and clay

Completed interval: 10 - 28'
Produced 75 GPM (initial test)

Charlestown Formation

White to gray, dense limestone, no visible porosity

Limestone interfingering with dolomite

Dark gray dolomite, fossiliferous, moldic porosity, does not appear to be permeable

Peerless Formation

Dark gray, fossiliferous limestone, dense, no visible porosity

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4.2 Targets

Most people within 4 miles of Palmetto Landfill obtain drinking water from a reservoir operated by the Palmetto County Water Authority (PCWA). The reservoir is located on the Ono River about 35 miles west of Angleton. Three municipal water systems within 4 miles purchase water from PCWA. Discussions with PCWA officials, reconnaissance of the area, and topographic maps have identified residences without municipal water service. These residences obtain drinking water from private wells completed in the Jacksonville Formation (Reference 6, p. 11; Reference 12).

Approximately 239 homes within 4 miles use private wells for drinking water (Reference 12). At 2.7 persons per household (the average for Palmetto County), this equates to 645 residents (Reference 13). The nearest residence relying on a private well is approximately 300 feet to the west of the landfill (Reference 6, p. 10). Within 0.25 mile of the landfill are six residences relying on private wells (Reference 6, p. 10).

There are no wellhead protection areas (WHPA) designated within Palmetto County.

4.3 Sample Locations

Ground water samples were collected from the six private wells, all within 0.25 mile of the site, regarded as primary targets during the PA. A duplicate sample was collected from the nearest well. A field blank was collected to detect possible container contamination. Table 1 presents sample numbers, descriptions, and objectives. Figures 3 and 5 show sample locations. Table 2 presents field measurements.

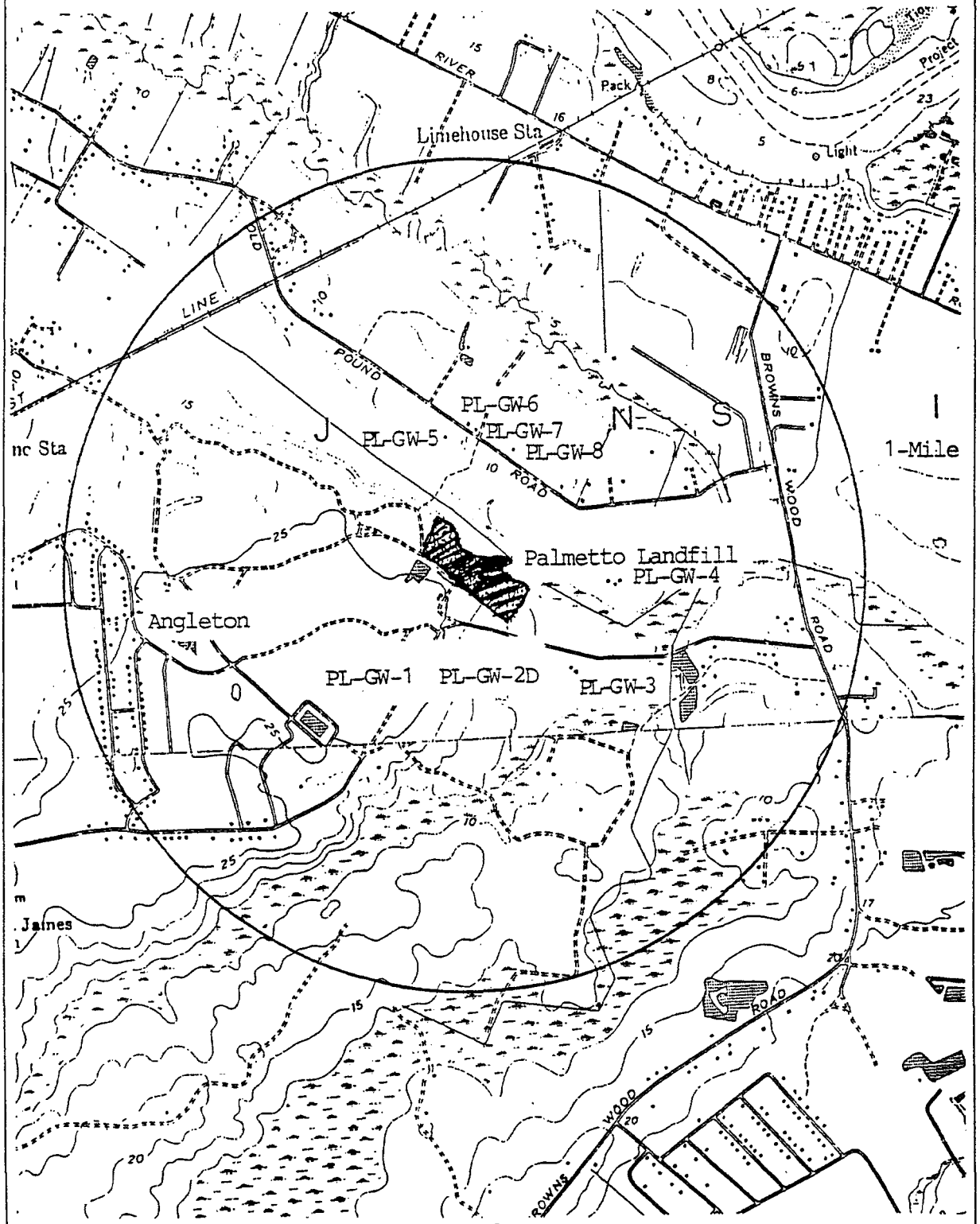
TABLE 2: FIELD MEASUREMENTS FOR GROUND WATER SAMPLES

Sample Number	Sample Depth (ft)	pH	Temperature EC	Conductivity mmhos/cm
PL-GW-1	10	5.8	23.5	650
PL-GW-2D	10	5.6	23.0	550
PL-GW-3	8	6.5	24.0	700
PL-GW-4	7	7.2	23.0	480
PL-GW-5	11	6.5	22.0	500
PL-GW-6	11	6.3	22.5	355
PL-GW-7	10	6.6	23.5	250

4.4 Analytical Results

The nearest drinking water well samples (PL-GW-1 and PL-GW-2D) contained vinyl chloride, TCE, and benzene in highly elevated concentrations. While vinyl chloride was not detected in any source sample, it is a degradation product of TCE, a substance deposited at the site. TCE also was detected at estimated levels in samples PL-GW-4 and PL-GW-3, which also exhibited estimated concentrations of vinyl chloride and chrysene.

FIGURE 5: SI GROUND WATER SAMPLE LOCATIONS
PALMETTO LANDFILL



Ethylbenzene was detected in low concentrations in samples PL-GW-5, PL-GW-6, and PL-GW-7. This substance, a component of gasoline, could have come from other offsite sources.

Toluene or bis(2-ethylhexyl)phthalate was detected in all samples except PL-GW-4. Toluene also was detected in the field blank, sample PL-GW-8. These compounds are common laboratory contaminants and could have resulted from laboratory procedures.

Arsenic, cadmium, lead, and chromium were detected at elevated concentrations in PL-GW-1 and PL-GW-2D. All of these hazardous substances were found in the waste/source samples. Zinc was detected in all samples except PL-GW-6.

4.5 Conclusions

Due to the lack of any ground water containment system at the landfill, the disposal methods used at the site, and the high water table of the uppermost drinking water aquifer, contaminants could migrate into ground water at this site. Nearby drinking water wells contain hazardous substances similar to those found in samples taken from the source, indicating a release to ground water. The primary source of drinking water for rural domestic users in the area is the shallow aquifer. Samples from the nearest well, located 300 feet from the site, exhibited elevated levels of organic and inorganic compounds.

5 . SURFACE WATER PATHWAY

5.1 Hydrology

Palmetto Landfill is bordered on three sides by a perennially flowing drainage ditch. The ditch also creates a localized drainage basin coincident with the 10-acre landfill. Leachate flows from the landfill and enters the ditch approximately 250 feet from where the ditch runs into Wildlife Creek. Overland drainage from the site flows northeast approximately 250 feet into Wildlife Creek, which has an average flow rate of 5 to 10 cubic feet per second (cfs). Wildlife Creek flows approximately 3.0 miles and enters Ono River (Reference 1), which has an average flow of 1,000 cfs (Reference 5, p. 132). Approximately 16 miles downstream the Ono River merges with the East River (Reference 5, p. 150).

5.2 Targets

No drinking water intakes are within 15 downstream miles of the site. Most residents are served by a reservoir 35 miles upstream of Palmetto Landfill. Residents not served by a municipal system obtain drinking water from private wells (Reference 11).

Wildlife Creek and Ono River are used for recreational fishing. Aquatic species commonly caught include wide mouth bass, shrimp, crabs, and clams. Recreational crawfish fishingoccurs in Wildlife Creek and the surrounding wetlands (Reference 14, pp. 13,15).

Numerous wetlands are within 15 downstream miles of the site. The nearest wetland (approximately 250 acres, 0.5 mile frontage) is approximately 0.1 mile downstream from the site on Wildlife Creek (Reference 1). No other sensitive environments are within 15 downstream miles of the site (Reference 15).

5.3 Sample Locations

Samples were collected at all surface water targets identified as primary targets during the PA, with the exception of two sensitive environments. The habitats of two Federally designated endangered species, the Bald Eagle and the Salt Marsh Harvest Mouse, were considered primary targets during the PA because they are known to be found in Palmetto County. However, the SI found that these sensitive environments do not exist in the surface waters (within 15 downstream miles) near the Palmetto landfill.

Seven sediment samples were collected to evaluate the surface water pathway. Table 1 presents sample numbers, descriptions, and objectives; sample locations are shown in Figure 3. The seven samples are:

- Two samples upstream from the site in Wildlife Creek to determine background levels.
- Three from Wildlife Creek at points where the drainage ditch intersects the creek to evaluate the impact of the site on the fishery: one from the northwest intersection point and two from the northeast intersection point.
- Two within the wetland to investigate contamination.

5.4 Analytical Results

Downstream sediment samples collected at the northeast intersection (PL-SD-3 and PL-SD-4D) contained elevated concentrations of several hazardous substances. Aldrin, arsenic, chromium, and lead were detected at concentrations significantly greater than those found in the background samples (PL-SD-6 and PL-SD-7). In general, very few organic compounds were found in the sediment samples. Most of the substances were detected at estimated concentrations. Mercury was detected at an estimated level in sample PL-SD-5.

5.5 Conclusions

A release of hazardous substances from the site into the drainage ditch was evidenced by the elevated concentrations of TCE, arsenic, chromium, and lead in the leachate sample (PL-WS-3 and PL-WS-4D). Analytical results suggest that these hazardous substances are migrating from the landfill into Wildlife Creek via the drainage ditch. Wildlife Creek is used for recreational fishing. Samples collected from the downstream wetland indicate that it has not been impacted by the site at this time.

6. SOIL EXPOSURE AND AIR PATHWAYS

6.1 Physical Conditions

When the site was closed in 1980, Palmetto Landfill was covered by 2 feet of clean soil and seeded. A chain link fence was installed around the site (Reference 3). The site is currently heavily vegetated by grass, weeds, and shrubs (Reference 4; Reference 7, p. 2). There is a locked gate across the road to the landfill (Reference 6, p. 2).

6.2 Soil and Air Targets

There are no workers at Palmetto landfill. No people live on Palmetto Landfill. The nearest residence is 300 feet to the west, and the nearest school is 0.5 mile to the north (Reference 6, p. 10). Six residences are within 0.25 mile of the site; the total population within 4 miles of the site, as determined by visual observations,

topographic maps, and the GEMS data base, is 7,989 people (Reference 1; Reference 7, p. 10; Reference 14). A 250-acre wetland is located on Wildlife Creek approximately 0. 1 mile from Palmetto Landfill. The critical habitat of the Bald Eagle is within 3 to 4 miles from the site; however the precise location cannot be determined (Reference 15).

6-3 Soil Sample Locations

Two samples were collected to investigate the soil exposure pathway—one sample from the property of the nearest residence approximately 300 feet from the site, and the other offsite to establish ambient conditions.

Table 1 presents sample numbers, descriptions, and objectives. Figure 3 shows soil sample locations.

6.4 Soil Analytical Results

Lead was detected in slightly elevated concentrations at the nearest residence (PL-SS-1).

6.5 Air Monitoring

Portable air quality monitors (OVA and HNu) were carried onsite during the SI. No measurements above background were detected. No formal air monitoring program was conducted.

6.6 Conclusions

The site is located in a sparsely populated rural area. The nearest residence is approximately 300 feet southwest of the site, and approximately 7,989 persons live within 4 miles. There was no indication of a release to the air pathway. No hazardous substances were detected in the residential soil sample at concentrations significantly greater than background levels.

7. SUMMARY AND CONCLUSIONS

The Palmetto Landfill SI attempted to gather data necessary to evaluate the site as a candidate for the NPL. Waste and environmental samples were collected and analyzed to characterize the types of substances deposited at the site and potential migration pathways. In addition, information was collected to confirm target populations and environments potentially at risk from the site.

Palmetto Landfill accepted an unknown quantity of municipal and industrial waste, including approximately 500 gallons of TCE waste. Wastes were deposited in unlined trenches 7 to 10 feet deep. Landfilling operations ceased when the landfill reached capacity in 1980. The landfill was then covered with 2 feet of soil and seeded. A chain link fence also was installed.

The SI indicated contamination at the landfill and in leachate discharging from the landfill to the drainage ditch at the perimeter of the site. Analytical results of sampling are presented in Table 3. Hazardous substances related to site wastes were detected in the nearest drinking water well. The substances found in the drinking water wells include TCE, vinyl chloride, arsenic, chromium, and lead. Other downgradient wells also may be contaminated.

Evidence of releases from the site was found in surface water sediment samples. Sediment samples collected where the drainage ditch discharges into Wildlife Creek had elevated concentrations of several inorganic compounds, including, arsenic, chromium, and lead.

TABLE 3 (PART 1): ANALYTICAL RESULTS FOR AQUEOUS SAMPLES

SUBSTANCE	PL-WS-3	PL-WS-4D	PL-GW-1	PL-GW-2D	PL-GW-3	PL-GW-4	PL-GW-5	PL-GW-6	PL-GW-7	PL-GW-8	Detection Limit
ORGANICS, ug/l											CRQL
Vinyl Chloride	---	---	4J	5	1J	---	---	---	---	---	10
Chloroethane	4J	3	---	---	---	---	---	---	---	---	10
Trichloroethylene	19	15	7.5	4J	2J	1J	---	---	---	---	10
Benzene	10	9	2.6	3.1	---	---	5J	---	---	---	10
Toluene	15	20	3	5	---	4J	---	3	---	2J	10
Bis(2-ethyl-hexyl)phthalate	32	14J	4	2	5J	---	2	2	3J	---	10
1,1-Dichloroethane	5	8	---	---	---	---	---	---	---	---	10
Chlorobenzene	---	---	---	---	---	---	---	---	4J	---	10
Ethylbenzene	17J	32	3J	1J	---	---	2J	2J	5J	---	10
Chrysene	---	---	---	---	2J	---	---	---	---	---	10
Aldrin	2J	7	---	---	---	---	---	---	---	---	0.05
INORGANICS, ug/l											CRDL
Aluminum	6,100	4,000	28,000	26,000	1,500J	13,000	15,000	5,300	2,600	---	200
Arsenic	31	26	10	6	---	---	---	---	---	---	10
Cadmium	5	3	2J	4.2	---	---	---	---	---	---	5
Chromium (VI)	6.5J	5.5	12	20J	20	14	5J	---	---	---	10
Iron	9,000	9,000	8,400	12,000	2,200	4,900	7,800	32,000	22,000	---	100
Lead	10	15	6.2	8.1	5J	10J	2J	5	---	---	3
Mercury	0.2J	0.2	---	---	---	---	---	---	---	---	0.2
Zinc	60	50	32	45	40	15	22J	---	5J	---	20

--- Material analyzed for but not detected above minimum quantitation limit
J Estimated value

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TABLE 3 (PART 2): ANALYTICAL RESULTS FOR NON-AQUEOUS SAMPLES

SUBSTANCE	PL-WS-1	PL-WS-2	PL-SD-1	PL-SD-2	PL-SD-3	PL-SD-4D	PL-SD-5	PL-SD-6	PL-SD-7	PL-SS-1	PL-SS-2	Detection Limit
ORGANICS, ug/kg												CRQL
Vinyl Chloride	---	---	---	---	---	---	---	---	---	---	---	10
Chloroethane	---	---	---	---	---	---	---	---	---	---	---	10
Trichloroethylene	3J	---	---	---	5J	4	---	---	---	---	---	10
Benzene	---	---	---	5J	---	---	---	---	---	---	---	10
Toluene	40	9	---	---	5J	5J	---	---	---	---	---	10
Bis(2-ethyl-hexyl)phthalate	19	13	---	---	---	---	---	---	---	---	---	330
1,1-Dichloroethane	---	---	---	---	---	---	---	---	---	---	---	10
Chlorobenzene	10J	---	---	---	---	---	---	---	---	---	---	10
Ethylbenzene	5	---	---	---	---	---	5J	---	---	---	---	10
Chrysene	---	---	---	---	5J	7J	---	---	---	---	---	330
Aldrin	560	75	---	---	35	42	---	---	---	---	---	1.7
INORGANICS mg/kg												CRDL
Aluminum	25,000	4,000	3,000	4,200	5,500	2,900	3,000	3,000	1,800	2,600	8,900	200
Arsenic	10	---	---	---	2.4	4J	---	---	---	---	---	10
Cadmium	15	2J	---	---	5J	1J	0.5J	---	---	---	---	5
Chromium (VI)	29	13	2.6	4	29	37	14	5	3	6	3.3	10
Iron	3,100	2,900	2,500	13,000	12,000	9,500	5,700	4,500	1,500	3,500	6,200	100
Lead	390	---	---	---	14	8.9	2.5J	0.3J	0.3J	4	3	3
Mercury	0.1	---	---	---	---	---	0.2J	---	---	---	---	0.2
Zinc	64	54	---	5	50	35	25	---	5J	5.4	7	20

--- Material analyzed for but not detected above minimum quantitation limit
J Estimated value

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